



ELECTRONIC
INNOVATIONS
IN ACTION

TUBES

PRODUCT INFORMATION

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Gated-Beam Discriminator

6KS6

FOR FM AND TV LIMITER AND
DISCRIMINATOR APPLICATIONS

The 6KS6 is a miniature gated-beam tube primarily designed to perform the combined functions of the limiter, discriminator, and audio-voltage amplifier in FM and television receivers.

GENERAL

ELECTRICAL

Cathode - Coated Unipotential

Heater Characteristics and Ratings

Heater Voltage, AC or DC* 6.3±0.6 Volts

Heater Current† 0.3 Amperes

Direct Interelectrode Capacitances§

Grid-Number 1 to All. 4.6 pf

Grid-Number 3 to All. 3.4 pf

Grid-Number 1 to Grid-Number
3, maximum 0.005 pf

MECHANICAL

Operating Position - Any

Envelope - T-5 1/2, Glass

Base - E7-1, Miniature Button 7-Pin

Outline Drawing - EIA 5-3

Maximum Diameter 0.750 Inches

Minimum Diameter 0.650 Inches

Maximum Over-all Length 2.625 Inches

Maximum Seated Height. 2.375 Inches

MAXIMUM RATINGS

DESIGN-MAXIMUM VALUES

Plate-Supply Voltage. 330 Volts

Accelerator-Supply Voltage. 330 Volts

Peak Positive Grid-Number 1 Voltage. 60 Volts

DC Cathode Current 13 Milliamperes

Heater-Cathode Voltage

Heater Positive with Respect to Cathode

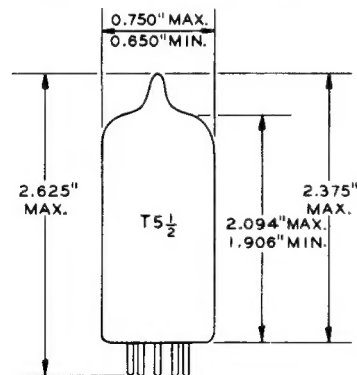
DC Component 100 Volts

Total DC and Peak. 200 Volts

Heater Negative with Respect to Cathode

Total DC and Peak. 200 Volts

PHYSICAL DIMENSIONS



EIA 5-3

TERMINAL CONNECTIONS

Pin 1 - Cathode, Focus Electrode,
and Internal Shield

Pin 2 - Grid Number 1 (Signal or
Limiter)

Pin 3 - Heater

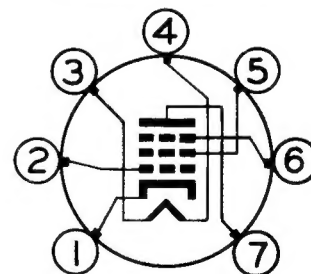
Pin 4 - Heater

Pin 5 - Grid Number 2
(Accelerator)

Pin 6 - Grid Number 3
(Quadrature)

Pin 7 - Plate

BASING DIAGRAM



EIA 7DF

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GENERAL  ELECTRIC

MAXIMUM RATINGS (Cont'd)

Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making allowance for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of all other electron devices in the equipment.

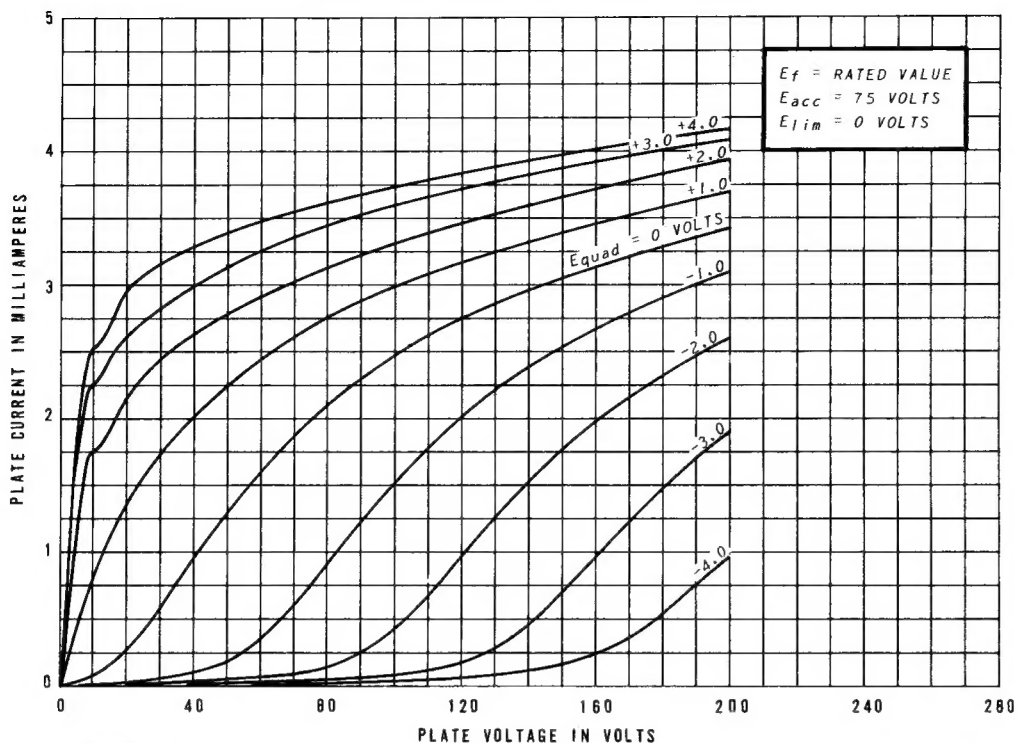
CHARACTERISTICS AND TYPICAL OPERATION**AVERAGE CHARACTERISTICS**

Plate Voltage	135	135	135	Volts
Accelerator Voltage	75	---	---	Volts
Accelerator-Supply Voltage	---	280	280	Volts
Accelerator Resistor	---	33000	33000	Ohms
Grid-Number 1 Voltage	0	0	0	Volts
Grid-Number 3 Voltage	+4.0	+4.0	0	Volts
Plate Current	---	5.0	---	Milliamperes
Accelerator Current	4.5	---	---	Milliamperes
Grid-Number 1 Transconductance	---	---	360	Micromhos
Grid-Number 3 Transconductance	---	---	700	Micromhos
Grid-Number 1 Voltage, approximate				
I _b = 20 Microamperes	---	---	-4	Volts
Grid-Number 3 Voltage, approximate				
I _b = 20 Microamperes	---	---	-4	Volts

NOTES

- * The equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.
- # Heater current of a bogey tube at E_f = 6.3 volts.
- § Without external shield.

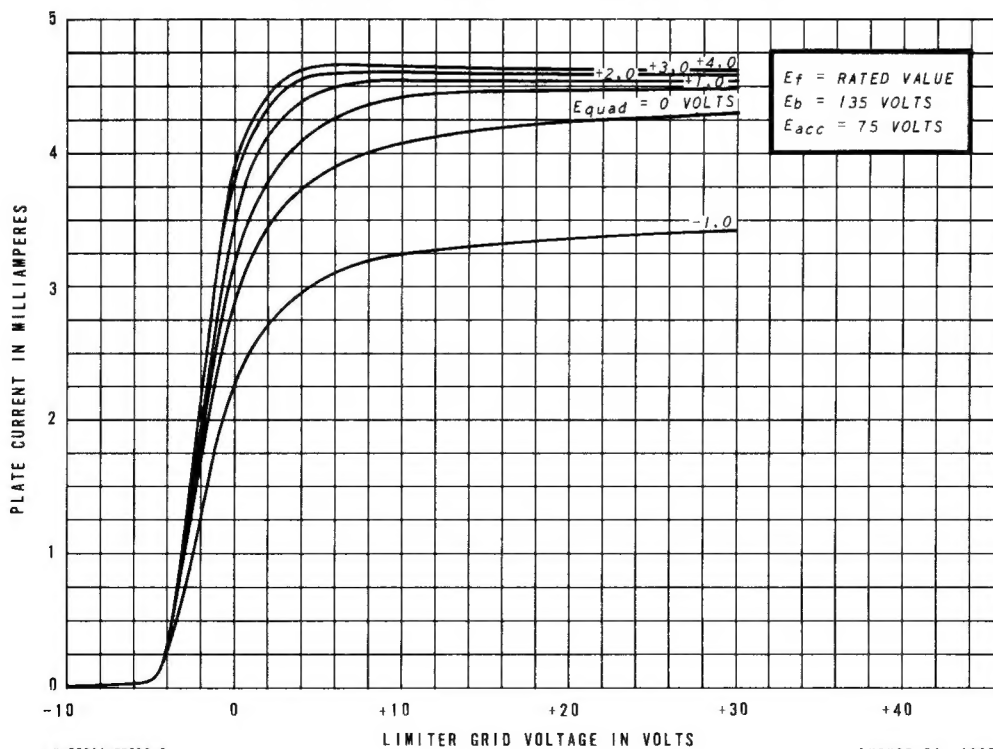
AVERAGE PLATE CHARACTERISTICS



K-55611-TD308-1

AUGUST 24, 1965

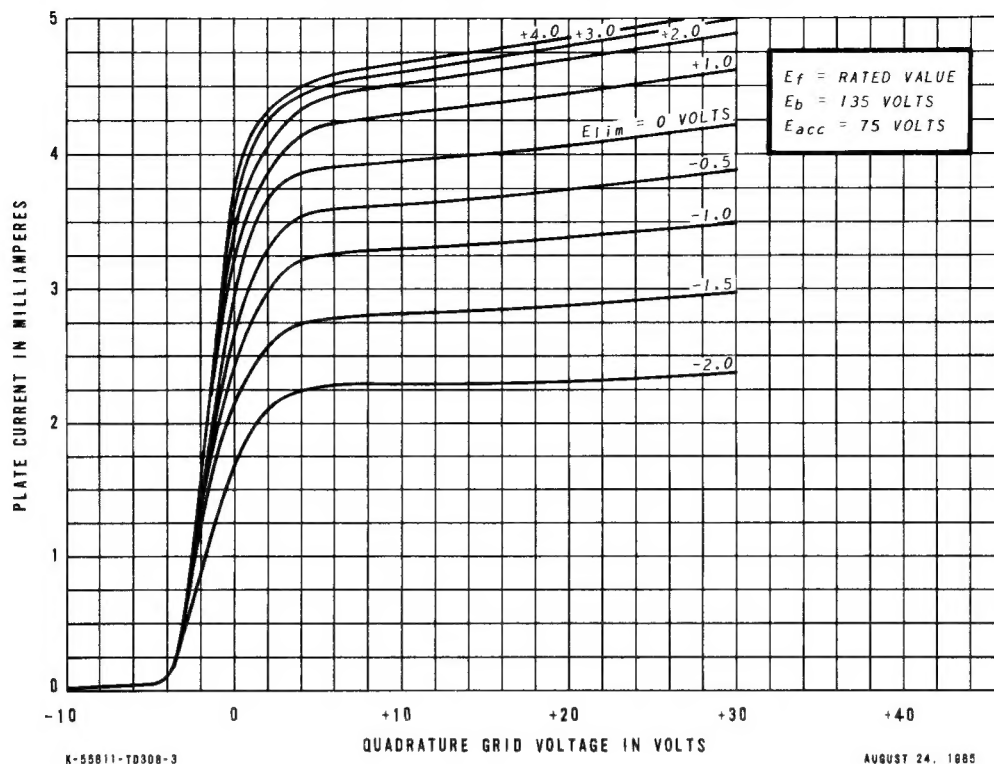
AVERAGE TRANSFER CHARACTERISTICS



K-55611-TD308-2

AUGUST 24, 1965

AVERAGE TRANSFER CHARACTERISTICS



TUBE DEPARTMENT
GENERAL  ELECTRIC
Owensboro, Kentucky